

THE NEXT U.S. STRATEGIC POSTURE — AND THE POSTURE AFTER NEXT

Annotated Bibliography

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Center for Global Security Research
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THE NEXT U.S. STRATEGIC POSTURE — AND THE POSTURE AFTER NEXT

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Key Questions:

- What will be the main attributes of the US strategic posture in 2030?
- Relative to the predicted Russian and Chinese strategic postures of 2030, will the US position have improved, stayed the same, or eroded? Why?
- What factors should guide the development of capabilities beyond 2030?

Panel Topics:

1. The U.S. Nuclear Deterrent in 2030 and Beyond
2. Missile Defense in 2030 and Beyond
3. Conventional Prompt Strike in 2030 and Beyond
4. Space and Cyberspace in 2030 and Beyond
5. Integration and the 2030 Strategic Toolkit
6. A 2030 Net Assessment of the Central Strategic Balances with Russia and China
7. A 2030 Net Assessment of Regional Balances

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Panel 1: The U.S. Nuclear Deterrent in 2030 and Beyond

- What is the existing modernization plan?
- What factors might obstruct success? Might new requirements emerge?
- What impact might alternative arms control futures have on modernization?

Woolf, Amy. "U.S. Strategic Nuclear Forces: Background, Developments, Issues." Washington, DC: Congressional Research Service, RL33640, April 27, 2020.

<https://fas.org/sgp/crs/nuke/RL33640.pdf>

This Congressional Research Service report provides the background and specific programs involved in the current U.S. nuclear modernization plan. Before presenting the details of the modernization plans the report discusses the history of arms reduction and limitation talks that took place during the Cold War and shows how these set the stage for the current stockpile. It also provides a brief description of the nuclear stockpile under previous administrations and then outlines the modernization plans currently underway for each leg of the nuclear triad. In addition to presenting the modernization plans, Woolf also includes information relevant to members of Congress such as the budget and the total cost of the modernization efforts.

Kuhn, Ulrich, et al. "Trilateral Arms Control? Perspectives from Washington, Moscow, and Beijing." Hamburg: Institute for Peace Research and Security Policy, March 2020.

https://ifsh.de/file/publication/Research_Report/002/20200224_IFSH_Research_Report_002_final.pdf

Ulrich Kuhn and his co-authors compiled perspectives from different think tank specialists who analyzed the requirements and possibilities for a trilateral arms control agreement among the United States, Russia, and China. Each of the national perspectives acknowledges the fact that current tensions might not allow for arms control agreements at the moment, but each author provides possible paths forward to start the dialogue for future agreements. Even though trilateral arms control agreements might not be easy to initiate and maintain, there are certain benefits for each of the "big three." This publication provides insight into the benefits and stability that could be gained through a successful trilateral arms control dialogue.

Bawden, Allison. "Assessing U.S. Plans to Modernize Its Nuclear Weapons." Washington, DC: Arms Control Association, April 2020. www.armscontrol.org/act/2020-04/features/assessing-us-plans-modernize-its-nuclear-weapons

Bawden's paper evaluates the current modernization plans in the United States and the obstacles that stand in the way of adequately modernizing the stockpile. The author acknowledges that certain factors might obstruct successful modernization such as schedule delays and inaccurate budget estimates. She notes that the current modernization plan is the most aggressive one since the end of the Cold War and the National Nuclear Security Administration (NNSA) faces planning and budget challenges that might be insurmountable if not addressed. In order to achieve modernization success, Bawden recommends that the NNSA set clear priorities so that progress can still be made in certain weapons programs if funding is cut in later years.

Gunzinger, Mark; Carl Rehberg; Jacob Cohn; Timothy A. Walton; and Lukas Autenried. "An Air Force for an Era of Great Power Competition." Washington, DC: Center for Strategic and Budgetary Assessments. 2019. <https://csbaonline.org/research/publications/an-air-force-for-an-era-of-great-power-competition>

This report provides recommendations for improving the Air Force inventory to make it more lethal and able to deter aggression from major powers such as Russia and China. The authors argue that the current inventory is not well equipped to deal with future conflicts since it has mostly been used for counter-terrorism and combatting "lesser regional aggressors." The Air Force modernization is a key portion of the current U.S. nuclear modernization plans and it bolsters conventional forces significantly as well with improvements in aircraft range and the percentage of stealth aircraft in the inventory. This report discusses new Air Force requirements and how they fit for emerging threats and the changing security environment in 2030 and beyond.

Miller, Nicholas L; and Vipin Narang. "Is a New Nuclear Age Upon Us?" *Foreign Affairs*, April 16, 2020. www.foreignaffairs.com/articles/2019-12-30/new-nuclear-age-upon-us

Miller and Narang argue that 2019 might be viewed by future scholars as a turning point in global nuclear affairs. The changes in the area of arms control as shown by the deterioration of the INF treaty and the doubts surrounding the continuation of New START. In addition to the breakdown of arms control agreements, the United States faced issues in dealing with the failed diplomatic efforts with North Korea and the higher levels of tension with Iran. Additionally, this "new nuclear age" is characterized by constrained allied relationships. Countries like South Korea and Turkey have increasingly more internal support for independent nuclear programs, and NATO allies are beginning to question the assurances offered by the U.S. nuclear umbrella. The authors conclude that this new nuclear environment appears more dangerous than the one prior to 2019.

Panel 2: Missile Defense in 2030 and Beyond

- What capabilities are likely to be in place in 2030?
- What technical options might the US then have for new capabilities by 2040?
- How much is enough? What factors should guide the further development of the US homeland defense posture? Of regional defenses?

Roberts, Brad. "On the Strategic Value of Ballistic Missile Defense." *Proliferation Papers*, No. 50, June 2014. <https://www.ifri.org/sites/default/files/atoms/files/pp50roberts.pdf>

In this paper, Roberts emphasizes the strategic importance of Ballistic Missile Defense (BMD) systems for modern nuclear challenges. Roberts uses the example of North Korea to characterize the problem of regional deterrence and shows the value of BMD in preventing conflict, containing escalation, and ultimately if necessary defeating an enemy. BMD systems allow the U.S. to escape a situation of mutual vulnerability with nations like North Korea that would fundamentally alter U.S. strategic interests and calculus and harm its alliances. The author argues that the destabilizing impact of limited U.S. BMD on the relationships with Russia and China have been exaggerated and warns against abandoning BMD projects, adding that modern technical options are available that promise stabilizing benefits.

O'Rourke, Ronald. "Navy Aegis Ballistic Missile Defense (BMD) Program: Background and Issues for Congress." Washington, DC: Congressional Research Service, RL33745, March 31, 2020. <https://fas.org/sgp/crs/weapons/RL33745.pdf>

This CRS report provides a background on the current progress of the Navy Aegis BMD program's funding, capabilities, and implementation. The Aegis program allows U.S. Navy cruisers and destroyers to conduct BMD operations as a more rapid and mobile alternative to land-based systems. Mobile BMD systems offer unique options for extended deterrence, and the CRS report contextualizes these options with the current capabilities of U.S. allies for regional deterrence. Finally, the report examines the potential for developing technologies such as ship-based lasers, electromagnetic railguns (EMRGs), and hypervelocity projectiles (HVPs) to enhance future BMD efforts.

Hill, Jon. Interview with Thomas Karako. "A Vision for the Future of Missile Defense." Washington, DC: Center for Strategic and International Studies, October 7, 2019. <https://www.csis.org/analysis/vision-future-missile-defense>

The CSIS interview between Thomas Karako and Vice Admiral Jon Hill examines the future of missile defense. In the past, U.S. BMD programs focused on intercepting the predictable ballistic trajectories from actors like Iran or North Korea. Vice Admiral Hill argues that missile defense is at a strategic inflection point as the modern deterrence

focus on Russia and China includes different political and technical considerations such as precise and maneuverable hypersonic capabilities. Vice Admiral Hill breaks down the operations of the current sensor architecture, fire control systems, and communication between radar and interceptor missiles, and described the requirements for next-generation interceptors.

Soofer, Robert; James N. Miller; and Rebecca Heinrichs. "Missile Defense and Stability: A Conversation with Deputy Assistant Secretary Robert Soofer and Dr. Jim Miller." Washington, DC: Hudson Institute, April 22, 2020. <https://www.hudson.org/research/15963-transcript-missile-defense-and-stability-a-conversation-with-deputy-assistant-secretary-robert-soofer-and-dr-jim-miller>

The Hudson Institute interview focuses on the state of homeland missile defense and its impact on strategic stability. Soofer claims that effective missile defense relies on a combination of a layered missile defense system, multi-domain defense capabilities, and the ability to strike missile launch sites. Soofer also outlines how the U.S. ability to defend its allies is a focal point for U.S. and adversary strategies. Miller argues it is politically and technically unfeasible for the U.S. to deploy a BMD system extensive enough to ensure safety against modern Russian or Chinese arsenals. Both speakers agreed that BMD should focus on rogue nations with more limited arsenals such as North Korea or Iran and emphasize capabilities such as the next-generation interceptor.

Heinrichs, Rebecca; and Henry Obering III. "Missile Defense for Great Power Conflict: Outmaneuvering the China Threat." *Strategic Studies Quarterly*. Vol. 13, No. 4, Winter 2019, pp. 37-56. <https://www.jstor.org/stable/10.2307/26815045>

Heinrichs and Obering focus on Chinese conventional missile capabilities and the unique challenges they pose for U.S. security. The authors emphasize that conventionally armed missiles are an enormous priority for Chinese strategy with the PLA Rocket Force being elevated to a full service. China sees its arsenal of ballistic and cruise missiles as the key to counter U.S. extended force projection by enabling them to strike foreign U.S. military sites without matching the enormous U.S. overseas presence. The authors outline how the U.S. can incorporate space capabilities to improve its missile defense systems and counter this Chinese strategy. The authors claim that U.S. security relies on comprehensive missile defense against the Chinese arsenal of conventional missiles.

Panel 3: Conventional Prompt Strike in 2030 and Beyond

- What US capabilities are likely to be in place in 2030?
- What technical options might the US then have for new capabilities by 2040?
- How much is enough? What role should these capabilities play in US strategies to compete, deter, and win?
- Should the US ask more of its allies? If so, what?

Woolf, Amy. "Conventional Prompt Global Strike and Long-Range Ballistic Missiles: Background and Issues." Washington, DC: Congressional Research Service, R41464, February 14, 2020.

<https://www.fas.org/sgp/crs/nuke/R41464.pdf>

This CRS report provides a thorough background to update Congress on the major concerns and issues relevant to the pursuit of conventional prompt global strike capabilities. The report outlines the potentially destabilizing effect of such missiles due to the inability of adversaries to distinguish if the delivery mechanisms possess conventional or nuclear warheads. However, the report also emphasizes the niche ability of such missiles for an early decapitation strike against targets outside the reach of current capabilities. Finally, the article encourages Congress to consider several delivery mechanisms beyond long-range missiles such as submarine-launch, bombers, cruise missiles, or scramjets.

Fraioli, Paul. "Hypersonic Weapons and Strategic Stability." International Institute for Strategic Studies, Vol. 26, Comment 4, March 2020. <https://www.iiss.org/~publication/23a21359-6cb1-4355-b6be-f6aba4a5c1e9/hypersonic-weapons-and-strategic-stability.pdf>

Fraioli warns that the advent of hypersonic missiles will prompt a resurgent Cold War arms race that threatens to devolve into uncontrolled capability escalation and strategic instability. Fraioli begins with an overview of hypersonic weapons development and then examines the current status of such programs for Russia, China, and the U.S. Fraioli concludes that hypersonic capabilities will be deployed by the end of 2020 and warns of their destabilizing effects, arguing that further arms control is unlikely. The difficulty of intercepting hypersonic weapons will change the nature of future arms races and the security dilemma by undermining stability and potentially incentivizing a decapitating first strike.

Abercrombie, Clarence; and Heather Venable. "Muting the Hype over Hypersonics: The Offense-Defense Balance in Historical Perspective." *War on the Rocks*. May 28, 2019.

<https://warontherocks.com/2019/05/muting-the-hype-over-hypersonics-the-offense-defense-balance-in-historical-perspective/>

Abercrombie and Venable focus on the spread of hypersonic weapons in the context of arms races. The authors argue that arms races will always oscillate between the dominance of offensive and defensive capabilities and that hypersonic weapons are no exception. The authors claim that the dominance of offensive capabilities can emphasize the deterrent effect of mutually assured destruction and stabilize global security. While there is currently no effective defense against hypersonic weapons, the article's historical perspective argues that defenses will inevitably emerge, and the authors encourage the U.S. to preserve parity with Russia and China in order to maintain a stable balance of power. One such example in the article is the potential for directed energy defenses.

Murano, Masahi. "The Japan-U.S. Alliance in a Post-INF World: Building an Effective Deterrent in the Western Pacific." Washington, DC: Hudson Institute, Dec 18, 2019.

<https://www.hudson.org/research/15571-the-japan-us-alliance-in-a-post-inf-world-building-an-effective-deterrent-in-the-western-pacific>

In this article, Murano defends the U.S. decision to withdraw from the INF Treaty based on Russian and Chinese capabilities. Murano argues that the most important issue with the INF Treaty was that China is not a signatory and it has been able to develop an enormous and diverse arsenal of ballistic and cruise missiles. There was no reason for the U.S. to abide by the treaty after Russia violated it. The recommended path forward for the U.S. is to take advantage of the options that the INF Treaty had prevented. One such opportunity is for the U.S. to pursue cruise and ballistic missiles that can target Chinese anti-aircraft capabilities. Such a strategy would decrease the impact of a preemptive strike, help ensure U.S. air and naval superiority, and maintain strategic stability.

Wilkening, Dean. "Hypersonic Weapons and Strategic Stability." *Survival*, Vol. 61, Oct/Nov 2019, pp. 129-148. <https://www.iiss.org/publications/survival/2019/survival-global-politics-and-strategy-october-november-2019/615-10-wilkening>

Wilkening criticizes the U.S. pursuit of conventionally armed hypersonic weapons by citing their detrimental effects on strategic stability. While he acknowledges their potential effectiveness, Wilkening expresses concern over the impossibility of distinguishing whether a hypersonic delivery vehicle contains a conventional or a nuclear warhead. Any attempt to use such missiles would have destabilizing effects, as their speed gives an adversary insufficient time to determine an appropriate response. The risk of such high-pressure scenarios is likely to prompt accidental nuclear escalation. Wilkening argues that there has been no effective attempt to mitigate these effects and discourages the U.S. from pursuing capabilities that would prompt such a scenario.

Panel 4: Space and Cyberspace in 2030 and Beyond

- Between now and 2030, are there likely to be substantial changes in US defensive and offensive capabilities in these domains? Of adversary capabilities?
- Might there be significant new technical options thereafter?
- How much is enough? What role should these capabilities play in US strategies to compete, deter, and win?

Bahney, Benjamin. "Space Strategy at a Crossroads: Opportunities and Challenges for 21st Century Competition." Livermore, CA: Center for Global Security Research, May 2020.

<https://cgsrc.llnl.gov/content/assets/docs/space-strategy-at-a-crossroads.pdf>

This paper discusses the role of space and cyber and their role in the 2017 National Security Strategy (NSS) and the 2018 National Defense Strategy (NDS) to compete, deter, and win in all domains. In order to accomplish these three vague tasks, Bahney and Pearl emphasize the necessity for an "integrated strategic future." Although integrating space and cyber into other warfighting domains and methods is currently a significant challenge, the Department of Defense is actively working on this. Integration will be a key challenge approaching 2030 and beyond, but the United States and its adversaries all face similar obstacles in achieving "all-domain operations."

Department of Defense. "2020 Defense Space Strategy Summary." Washington, DC: DoD, June 2020. [https://media.defense.gov/2020/Jun/17/2002317391/-1/-1/1/2020 DEFENSE SPACE STRATEGY SUMMARY.PDF](https://media.defense.gov/2020/Jun/17/2002317391/-1/-1/1/2020%20DEFENSE%20SPACE%20STRATEGY%20SUMMARY.PDF)

This DoD report outlines the strategic priorities as space more formally becomes a warfighting domain. The report discusses the complexity of the space domain and how commercial and international activities make it difficult to protect critical space assets and maintain strategic advantages. After the initial priority of establishing the U.S. Space Force (USSF) as an independent branch of the armed forces and the U.S. Space Command (USSPACECOM) as a unified combatant command, the DoD is now focusing on goals to maintain both stability and an advantage in space. Their goals include increasing integration with other domains and ensuring that space is kept secure, stable, and accessible up to 2030 and beyond.

Moltz, James C. "The Changing Dynamics of Twenty-First-Century Space Power." *Journal of Strategic Security*, Vol. 12, No. 1, 2019, pp. 15–43.

https://www.jstor.org/stable/pdf/26623076.pdf?ab_segments=0%2Fbasic_search%2Fcontrol

In this paper Moltz argues that in assessing the future of space power and comparing the United States to China and Russia, it is necessary to take into account that space innovation is increasingly coming from the private industry. Moltz predicts that the future of space innovation will be commercially led and if the United States can leverage this fact and utilize private industry more than the state-controlled innovation of adversaries, then this partnership with private companies could lead to a strategic advantage in the space domain. This paper outlines the technical options in space as it becomes increasingly important to maintain a strategic advantage.

Healey, Jason; and Caudill, Stuart. "Success of Persistent Engagement in Cyberspace." *Strategic Studies Quarterly*, Air University Press, 2020.

https://www.jstor.org/stable/pdf/26891881.pdf?ab_segments=0%2Fbasic_search%2Fcontrol

Healey and Caudill's paper discusses persistent cyber engagement and what the United States must do to effectively utilize this strategy in cyber operations. The requirements for persistent engagement are strong military and civilian leadership, an organized force equipped for persistent engagement technologically, clear signaling to adversaries, trust in international partners, and a strong interagency process. The authors argue that the United States has strong leadership and an equipped force, but it must bolster the interagency process and trust allies more in order to strengthen cyber operations for persistent engagement. Persistent engagement is a strategy that will help the U.S. compete, deter, and win, and thus the DoD should work to make the strategy effective.

Rieber, Jonathan; and Benjamin Bahney. "The U.S. Government Can Deepen Its Operational Partnership With the Private Sector to Better Defend the U.S. in Cyberspace." *Lawfare*, March 13, 2020. www.lawfareblog.com/us-government-can-deepen-its-operational-partnership-private-sector-better-defend-us-cyberspace

Rieber and Bahney discuss the benefits of partnerships between the U.S. government and the private sector in cyberspace. These partnerships allow the United States to work with companies to deny adversaries services or information. Additionally, the United States can partner with these companies to de-escalate in times of gray area conflict that involves private companies. Bolstering U.S. partnerships with the private sector is becoming increasingly logical and necessary because most technological infrastructure is owned by these companies and they will most likely be targets for adversary cyberattacks. Although some ideological differences remain between the U.S. military and technology companies, these differences should be set aside to cooperate on operational cyber planning.

Sulmeyer, Michael. "How the U.S. Can Play Cyber-Offense." *Foreign Affairs*, February 15, 2019. www.foreignaffairs.com/articles/world/2018-03-22/how-us-can-play-cyber-offense

This article uses past examples of offensive cyberattacks by Russia and China to argue that the United States should also take part in more offensive cyber endeavors. Sulmeyer asserts that tampering with U.S. elections and the theft of U.S. intellectual property via cyber campaigns has gone largely unacknowledged by the United States. The Department of Defense must focus more on cyber deterrence. This strategy is difficult because it comes with problems such as navigating the gray area of conflict and parting with Cold War deterrence theories to adapt to 21st century problems. In order to better compete, deter, and win in cyberspace, the U.S. should degrade enemy hacking capabilities rather than spend time convincing adversaries to stop hacking.

Panel 5: Integration and the 2030 Strategic Toolkit

- Between now and 2030, what progress can be expected on conventional/nuclear integration? On offense/defense integration? On all-domain integration?
- What are the barriers to improved integration? Which are likely to prove enduring?

Peters, Robert; Justin Anderson; and Harrison Menke. "Deterrence in the 21st Century: Integrating Nuclear and Conventional Force." Center for the Study of Weapons of Mass Destruction, December 3, 2018. <https://wmdcenter.ndu.edu/Publications/Publication-View/Article/1703804/deterrence-in-the-21st-century-integrating-nuclear-and-conventional-force/>

This publication asserts that potential adversaries believe that advancing their nuclear forces is vital to their defense posture to prevail in negotiations or to confront the United States. Furthermore, these adversaries, including Russia, China, and North Korea, have integrated a nuclear dimension into various domains and phases of conflict. According to the paper, the United States must think of conventional and nuclear deterrence as intertwined in order to counter the hybrid nuclear-conventional strategies of its adversaries. The authors support the call within the 2018 Nuclear Posture Review to "strengthen the integration of nuclear and non-nuclear military planning" and offers initial steps forward.

Kulesa, Łukasz. "The Future of Deterrence: Effectiveness and Limitations of Conventional and Nuclear Postures – New Perspectives on Shared Security: NATO's Next 70 Years." Carnegie Europe, November 28, 2019. <https://carnegieeurope.eu/2019/11/28/future-of-deterrence-effectiveness-and-limitations-of-conventional-and-nuclear-postures-pub-80440>

The paper addresses present and future challenges to NATO's collective security. Kulesa organizes the argument around three dimensions of deterrence: who, what, and how. The "who" section recognizes that Russia is not the sole threat facing NATO, thus the alliance needs to develop a tailored strategy to meet its needs. The "what" refers to the need to specify concrete actions that can be taken to enhance deterrence. He highlights cyberattacks as a point of ambiguity that needs to be more rigorously addressed in NATO's deterrence framework. The "how" section offers various recommendations, emphasizing that NATO does not need to mirror the activities of its adversaries to deter effectively.

Mauroni, Al. "Tearing Down the Nuclear Firewall." *War on the Rocks*, October 15, 2019. <https://warontherocks.com/2019/10/tearing-down-the-nuclear-firewall/>

This article argues that the U.S. military needs to prepare its conventional forces to fight through a limited nuclear war and that the necessary planning and training is not currently evident. Mauroni states that a nuclear taboo among U.S. political leaders has left defense analysts and military planners in a state of uncertainty about considering what happens after nuclear exchange. Due to this "conventional-nuclear firewall" the United States struggles with developing a contemporary "theory of victory" for using nuclear weapons below the level of strategic conflict, and policymakers need to move forward on the issue.

Parthemore, Christine. "The Problem of Blurring Conventional and Nuclear Deterrence." London: Chatham House, April 20, 2020. <https://reader.chathamhouse.org/perspectives-nuclear-deterrence-21st-century>

This article by Parthemore addresses the danger of integrating conventional and nuclear deterrence. In particular, she points out that blurring conventional and nuclear deterrence have major faults, and in some scenarios may increase the likelihood that nuclear weapons will be used. The emerging unpredictability in a conflict could quickly escalate the crisis, and it would be dangerous to believe that all sides would respond predictably. Differences in definitions of core concepts (e.g. strategic versus non-strategic non-nuclear attacks) also heighten risks. Ultimately, she concludes there would be significant security value in re-establishing starker lines that hold nuclear weapons as exceptional.

Roberts, Brad. "It's Time to Jettison Nuclear Posture Reviews." *Bulletin of the Atomic Scientists*. Vol. 76, No. 1, 2020. pp. 31–36. <https://doi.org/10.1080/00963402.2019.1701282>

Roberts argues that the needed integration of military tools for new challenges will continue to prove elusive if Pentagon leaders continue past practice in the form of separate, capability-specific policy and posture reviews. Such separate reviews have outlived their usefulness. Instead, Roberts argues, the quadrennial review process should be revamped to encompass all military means in a single integrated whole. This would also prove helpful in addressing a series of dead-ends in US strategic policy that are only beginning to come into focus.

Panel 6: A 2030 Net Assessment of the Central Strategic Balances with Russia and China

- How are leaders in Russia, China, and the US likely to assess the strategic military balance in 2030?
- Will they perceive it as stable and their interests in a credible deterrent secure? Why? Why not?
- Will the US have gained position, lost, or held steady? By what metrics?

Miller, James N.; Fontaine, Richard. "A New Era in U.S.-Russian Strategic Stability." Washington, DC: Center for a New American Security, September 2017.

<https://www.cnas.org/publications/reports/a-new-era-in-u-s-russian-strategic-stability>

In this report, Miller and Fontaine argue that parallel changes in U.S.-Russian political relations and the military-technological landscape are fundamentally reshaping the ways in which a U.S.-Russian crisis and conflict would likely unfold. They analyze three distinct but related pathways to future U.S.-Russia crisis and conflict. The first looks at U.S.-Russia relations through a view from Washington, Europe and Moscow. The second identifies the slippery slopes towards escalation by focusing on the structural incentives and potential escalation scenarios. The third pathway outlines the road to strategic instability by looking at the shifting military-technological landscape and the effects of non-nuclear strategic counterforce.

Kofman, Michael; Fink, Anya; Edmonds, Jeffrey. "Russian Strategy for Escalation Management: Evolution of Key Concepts." Alexandria, VA: Center for Naval Analysis, April 2020.

https://www.cna.org/CNA_files/PDF/DRM-2019-U-022455-1Rev.pdf

This CNA report looks at the evolution of escalation management, and intra-war deterrence in Russian military strategy. Russia's strategic deterrence is built on a holistic approach to influence the decision making of its adversaries by military and non-military

means. Russian military thinking on deterrence includes deterrence by fear inducement, deterrence through the limited use of military force, and deterrence by defense. In a conflict, Russian escalation management concepts can be divided into periods of demonstration, adequate damage infliction, and retaliation. Russian strategic culture emphasizes cost imposition over denial for deterrence purposes, and using forms of calibrated damage as a vehicle by which to manage escalation.

Cunningham, Fiona S.; Fravel, Taylor M. "Dangerous Confidence? Chinese Views on Nuclear Escalation." *International Security*, Vol. 44, No. 2, Fall 2019.

https://www.mitpressjournals.org/doi/full/10.1162/isec_a_00359

Cunningham and Fravel focus on Chinese views of nuclear escalation. They argue that China is skeptical that escalation could be controlled after nuclear use, and therefore they are likely to be restrained from the limited use of nuclear weapons. China's operational doctrine and force structure both support this view. Space, cyber and conventional capabilities are likely to be used as alternative tools of strategic leverage. China's confidence that a conflict with the United States would not escalate to a nuclear crisis might prevent Beijing from identifying nuclear escalation risks, while the U.S. appears more confident that a nuclear escalation could be controlled. In an actual conflict, these different views might push the two countries into an unlimited nuclear war.

Miller, Benjamin M. and Jacob L. Heim. "Measuring Power, Power Cycles, and the Risk of Great-Power War." Santa Monica, CA: RAND Corporation, April 15, 2020.

<https://doi.org/10.7249/RR2989>

Combining the assumptions of power cycle theory with their methodology, the authors quantitatively compare the risk of major-power conflict across a variety of future scenarios. These scenarios assess the implications of China experiencing a decade of slower than expected economic growth, a rapid increase in global population, and the effects of climate change on the balance of power. Their findings suggest that the global balance of power will remain intact until at least the year 2040. As such, the risk for global war is unlikely to change radically. The authors are careful to note that this model is not intended to act as an accurate forecast mechanism but rather as a useful way for policymakers to identify moments in the future when global conflict may become more likely.

Roberts, Peter and Sidharth Kaushal. "Strategic Net Assessment: Opportunities and Pitfalls." *The RUSI Journal*, Vol. 163, No. 6, 2018, pp. 66–76. <https://doi.org/10.1080/03071847.2018.1562025>

The UK Ministry of Defense has stated that it plans to create a strategic net assessment capability. Net assessment is a "holistic framework which integrates multiple levels of analysis, including political circumstances, alliances, differences in perception, and force deployment, with more traditional material factors to provide an overarching prognosis

of a given situation.” Net assessment envisions a series of scenarios and the probabilities of those scenarios occurring, and it is useful for analyzing strategic competition. The authors identify several weaknesses of net assessment and make suggestions as to how it can be improved.

Panel 7: A 2030 Net Assessment of Regional Balances

- Will NATO’s deterrence posture be fit for purpose in 2030?
- Will the deterrence postures of US alliances in the Indo-Pacific be fit for purpose?
- Why? Why not?

Bowman, Bradley, and John Hardie. “Aligning America's Ends and Means in the Indo-Pacific.” *Defense News*, April 21, 2020.

<https://www.defensenews.com/opinion/commentary/2020/04/22/aligning-americas-ends-and-means-in-the-indo-pacific/>

Earlier in 2020, USINDOPACOM warned in a report that it lacks the resources and capabilities necessary to implement the National Security Strategy. The article highlights the merits of a potential Indo-Pacific Deterrence Initiative (IPDI), similar to the European Deterrence Initiative. They argue that an IPDI would bring sustained focus on less glamorous but equally vital capabilities, especially infrastructure and logistics. The authors highlight how the response to Russia after 2014 has not been mirrored by a response to China, which is an even greater threat in the long-term. Citing Rep. Mac Thornberry, the ranking member of the House Armed Services Committee, the article emphasizes that it’s time to “put our money where our mouth is” and prioritize Indo-Pacific security.

Cronin, Patrick M. M, Abigail Grace, Daniel Kliman, and Kristine Lee. “Contested Spaces - A Renewed Approach to Southeast Asia.” Washington, DC: Center for a New American Security, March 20, 2019. <https://www.cnas.org/publications/reports/contested-spaces>

This CNAS paper advocates for revamping America’s approach towards Southeast Asia. After the Obama presidency, U.S. engagement with the region lost momentum at the outset of the Trump administration. The paper highlights the growing challenges, including China’s goals of drawing large segments of the area into its sphere of influence. Generally, countries in the region remain hesitant to align more overtly with the United States since they do not perceive a comprehensive U.S. economic strategy that offers a meaningful alternative to China’s combined trade and investment. Since U.S. efforts in Southeast Asia have taken a lower profile, openings have been left for China to advance its regional objectives. Japan is a critically determinative ally for Southeast Asia’s long-term strategic alignment.

Hodges, Ben, Janusz Bugajski, Ray Wojcik, and Carsten Schmiedl. "NATO Needs a Coherent Approach to Defending Its Eastern Flank." *War on the Rocks*, June 11, 2020.

<https://warontherocks.com/2020/06/nato-needs-a-coherent-approach-to-defending-its-eastern-flank/>

This article argues that US security measures are disjointed. It emphasizes the significance of the Black Sea region by eliminating the existing "tiered" forward presence, which includes "enhanced Forward Presence" in the Baltic Sea region and "tailored Forward Presence" in the Black Sea region. Other initiatives include increased security cooperation programs, upgraded air and missile capabilities by U.S. allies, and support for Ukraine and Georgia. NATO's prioritization of the Baltic region over the Black Sea region has created gaps that Russia could potentially exploit. Raising the priority of the Black Sea region would create the view of "one flank, one threat, one presence," ultimately presenting a united, unassailable front against Moscow's assertiveness.

Simón, Luis, and Alexander Lanoszka. "The Post-INF European Missile Balance: Thinking About NATO's Deterrence Strategy." *Texas National Security Review*, May 27, 2020.

<https://tnsr.org/2020/05/the-post-inf-european-missile-balance-thinking-about-natos-deterrence-strategy/>

This publication addresses the imbalance of military forces between NATO and Russia in the Baltic region. The authors assess what a post-INF Treaty context may mean in light of recent NATO efforts to deter Russia. The introduction of ground-based, theater-range missiles could help NATO restore the local strategic balance in the Baltic region, thereby strengthen deterrence and help to create the necessary leverage to get Russia back into meaningful arms control negotiations. The authors discuss theater-range missiles' advantages vis-à-vis other missiles and how they may relate to other elements of NATO's deterrence strategy. In the conclusion, they discuss how the debate over ground-based, theater-range missiles may connect to the debate over transatlantic burden-sharing.

Tasleem, Sadia, and Toby Dalton. "Nuclear Emulation: Pakistan's Nuclear Trajectory." *The Washington Quarterly*. Vol. 41, No. 4, 2018, pp. 135–55.

<https://doi.org/10.1080/0163660x.2018.1558662>

This essay analyzes Pakistan's nuclear program by portraying a consistent logic driving Pakistan's nuclear decision making. For Pakistani officials and scholars, increasing and diversifying Pakistan's nuclear arsenal is not a policy choice, but rather a compulsion to maintain an effective deterrent vis-à-vis India. Any advances in India's conventional military capability, nuclear arsenal, or strategic position amplify the perception of an incessant threat for which Pakistan has no recourse other than nuclear weapons. "Full-spectrum" capabilities provide a way to keep up and ensure that Pakistan's deterrence remains credible. The paper examines to what extent Pakistan emulates NATO's nuclear strategy, exploring how the NATO analogy is utilized in the discourse.



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